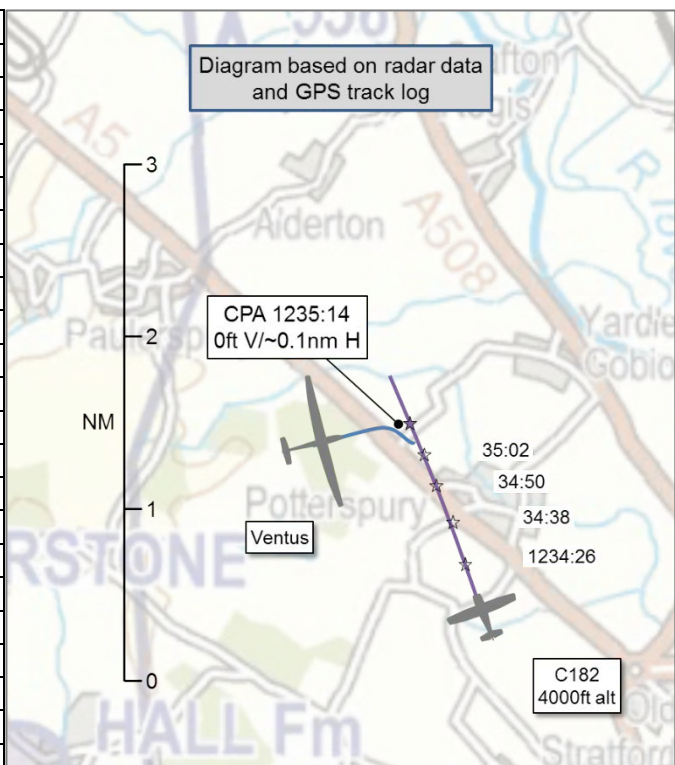


AIRPROX REPORT No 2019176

Date: 03 Jul 2019 Time: 1235Z Position: 5205N 00055W Location: ivo Silverstone

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Ventus	C182
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Oxford
Altitude/FL	~4000ft	4000ft
Transponder	Not fitted	A, C, S
Reported		
Colours	White	Red, white
Lighting	Not fitted	Strobes
Conditions	VMC	VMC
Visibility	30km	10km
Altitude/FL	4000ft	4000ft
Altimeter	QNH (1026hPa)	NK
Heading	075°	'SE'
Speed	75kt	120kt
ACAS/TAS	FLARM/SkyEcho 2	Not fitted
Alert	None	None
Separation		
Reported	100ft V/80m H	200ft V/500m H
Recorded	0ft V/~0.1NM H	



THE VENTUS PILOT reports that he was in cruising flight between thermals, heading east-northeast towards Olney with several other gliders in the area. Conditions were good and visibility was excellent. He suddenly spotted a high-wing Cessna-type aircraft in the 2 o'clock position at his level at a range of 100m that crossed rapidly in front from right-to-left. He initiated a hard right-turn to pass behind. He was not sure if the other aircraft was climbing, but it seemed to appear from a blind spot. He thought the other pilot may have spotted him slightly after he saw the Cessna and then turned slightly right (away) and descended. He stated that if he had not turned then they would have been very close indeed (<50m). His glider is equipped with FLARM (in and out) and he was transmitting ADS-B Out using a SkyEcho 2. He noted he was not currently able to display ADS-B In and that the workload in soaring flight precluded reporting of an Airprox by radio.

The pilot assessed the risk of collision as 'Medium'.

THE C182 INSTRUCTOR reports that there was intense gliding activity with many 'pop-ups' and that the Airprox occurred outside the gliding competition NOTAM area.

The pilot assessed the risk of collision as 'Low'/'Medium'.

THE C182 OPERATING AUTHORITY commented that this was a conflict in Class G airspace between a C182 training aircraft and a glider in the vicinity of Silverstone motor racing circuit. The C182 pilot was in receipt of a Basic Service from Oxford Radar and had multiple encounters with gliders. He was therefore uncertain as to which specific encounter to report. The C182 pilot stated that encounters with gliders are frequent in that airspace and, on that day, he was aware of a NOTAM notifying a gliding competition at Edgehill/Shenington. The Airprox was, however, approximately 15nm from that site. The pilot described that his normal reaction upon sighting a glider was to turn away and rock the aircraft wings. He did not consider that any of the encounters on that day merited filing an Airprox but described

them as 'everyday events'. As a way of mitigating the risk inherent with this type of event, the company is researching an update to their EFIS to include a suitable Traffic Advisory System in its C182 aircraft.

THE OXFORD CONTROLLER did not file a report.

Factual Background

The weather at Oxford and Cranfield was recorded as follows:

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EGTK 031220Z 05005KT 360V080 9999 FEW049 21/10 Q1027
EGTK 031250Z 05005KT 010V070 CAVOK 21/08 Q1027
EGTC 031220Z 02005KT 310V050 9999 FEW048 20/08 Q1027
EGTC 031250Z 04005KT 360V070 9999 FEW048 21/08 Q1027
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Analysis and Investigation

UKAB Secretariat

The Ventus and C182 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as converging then the C182 pilot was required to give way to the Ventus².

Comments

BGA

It is very good to see some glider pilots adopting ADS-B Out technology to maximise their electronic visibility, and we are pleased to read that the C182 operator is considering a TAS installation. However, without near-universal fitment and interoperability, lookout will remain the primary barrier available in the Open FIR, and was effective, albeit late, in this case. It is a common misconception that Gliding Competition NOTAMs mean that glider traffic will be contained within the NOTAM area; during the summer months gliders may be encountered almost anywhere in Class G.

Summary

An Airprox was reported when a Ventus and a C182 flew into proximity near Silverstone motor racing circuit at 1235hrs on Wednesday 3rd July 2019. Both pilots were operating under VFR in VMC, the Ventus pilot not in receipt of a FIS and the C182 pilot in receipt of a Basic Service from Oxford Radar.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and radar photographs/video recordings. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board first discussed the Ventus pilot's actions and agreed that he had made more effort than most by equipping the glider with FLARM and ADS-B Out. Unfortunately, the C182 transponder was not compatible with the glider TAS (**CF5**) and no alert could be generated. In the event, the Ventus pilot saw the C182 at a late stage (**CF7**) and took emergency avoiding action. Members discussed whether the C182 instructor or student had seen the Ventus and surmised from the report that they either had not seen it or had seen it at such a late stage that they could not have affected the separation at CPA; effectively a non-sighting (**CF6**). Neither pilot had had SA on the position and track of the other aircraft (**CF1**, **CF4**) and members wondered whether either or both pilots would have been better served by obtaining a surveillance based FIS. It was acknowledged that this may not have been possible at the position of the Airprox and that a glider pilot may not hold an R/T license or have the capacity to do so

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(2) Converging.

in any case [UKAB Post-Board note: In subsequent discussion with the C182 pilots it transpired that a Traffic Service had been requested but could not be provided due to controller workload]. The Airprox also highlighted what members thought may be common misconceptions regarding gliding competition NOTAMs in that the competition route tasking will cover an area well outside the NOTAM and that many gliders not operating in the competition will likely be airborne on a fine weather summer day [UKAB Post-Board Note: The Ventus pilot remarked that he had not been involved in the NOTAM'd competition and was operating from an entirely different airfield, thereby highlighting the fact that a gliding NOTAM will only warn of a part of total gliding activity on any given day]. The gliding member showed the Board a map of the 141 gliding flights operating with FLARM on that day, and commented that this likely represented a fraction of the total number of gliders flying on the day.

Regarding the risk, some members felt that the Ventus pilot's assessment of the risk as 'Medium' indicated that a risk assessment of Category C was appropriate (no risk of collision). However, after further discussion, members agreed that the resultant separation, the late sighting by the Ventus pilot (and the fact that he had conducted a hard turn to avoid), and the non- or effectively non-sighting by the C182 crew, were such that safety had been much reduced below the norm and so an assessment of risk Category B was appropriate.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2019176			
CF	Factor	Description	Amplification
Ground Elements			
• Situational Awareness and Action			
1	Contextual	• Situational Awareness and Sensory Events	Not required to monitor the aircraft under the agreed service
Flight Elements			
• Situational Awareness of the Conflicting Aircraft and Action			
4	Contextual	• Situational Awareness and Sensory Events	Generic, late, no or incorrect Situational Awareness
• Electronic Warning System Operation and Compliance			
5	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
• See and Avoid			
6	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots
7	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

Degree of Risk: B.

Recommendation: Nil.

Safety Barrier Assessment³

In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Ground Elements:

³ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

Situational Awareness of the Confliction and Action were assessed as **not used** because the Ventus pilot was not in receipt of a FIS and the C182 pilot was not in receipt of a FIS that required the controller to monitor his position.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot was aware of the proximity of the other aircraft until visually sighted.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the C182 was not fitted with a TAS and the C182 transponder was not compatible with the Ventus TAS.

See and Avoid were assessed as **partially effective** because the Ventus pilot saw the C182 at a late stage and was able to take emergency avoiding action.

Airprox Barrier Assessment: 2019176		Outside Controlled Airspace		Effectiveness					
Barrier		Provision	Application	0%	5%	10%	15%	20%	
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar to 5%]					
	Manning & Equipment	✓	✓	[Green bar to 5%]					
	Situational Awareness of the Confliction & Action	✗	○	[Red bar to 15%]					
	Electronic Warning System Operation and Compliance	●	●	[Grey bar to 5%]					
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar to 10%]					
	Tactical Planning and Execution	✓	✓	[Green bar to 10%]					
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓	[Red bar to 20%]					
	Electronic Warning System Operation and Compliance	✗	✓	[Red bar to 15%]					
	See & Avoid	⚠	⚠	[Yellow bar to 20%]					
Key:		Full	Partial	None	Not Present	Not Used			
Provision	✓	⚠	✗	●	○				
Application	✓	⚠	✗	●	○				
Effectiveness	Green	Yellow	Red	Grey	Red box				